

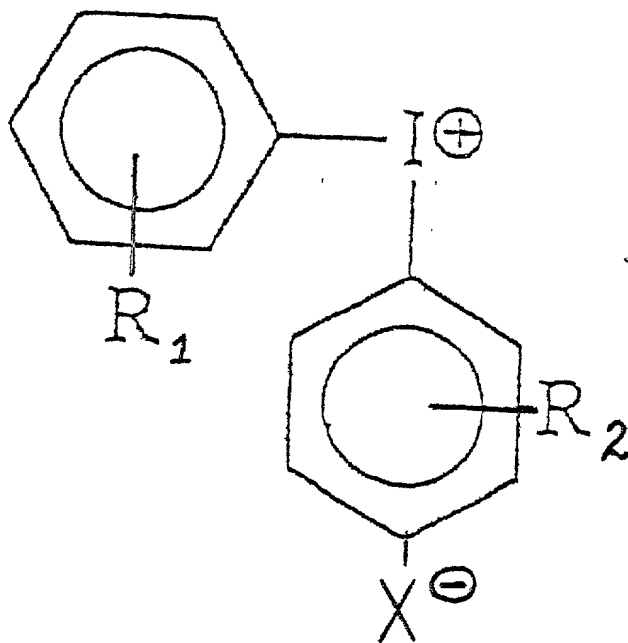
CLAIMS:

1. A zwitterionic compound, comprising:

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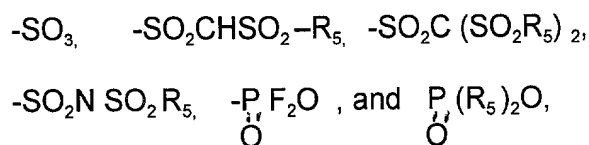


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wherein X^- is selected from the group of compounds consisting of: sulfur-containing groups, nitrogen-containing groups, and fluorine-containing groups; and

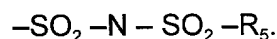
wherein R_1 and R_2 are each independently selected from the group consisting of substituted or unsubstituted: alkyls, aryls, halides, and fluorinated alkyls, nitrogen containing groups, halogenated alkyls, alkoxy, aryloxy, halogenated alkoxy, unsaturated alkyls, thioalkyls, unsaturated fluorinated alkyls, unsaturated alkoxy keto alkyls, alkoxy, aryloxy, keto aryls, sulfonyl alkyl, sulfonyl aryls.

2. The compound of claim 1 in which X^- comprises one of the following entities selected from the group consisting of:

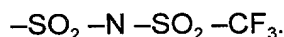


wherein R_5 is selected from the group consisting of substituted or unsubstituted alkyls, aryls, cycloalkyls, fluorinated alkyls, and fluorinated cycloalkyls.

3. The compound of claim 2 in which X^- comprises:



4. The compound of claim 2 in which X^- comprises:



5. The compound of claim 3 in which R_5 is a fluorinated alkyl.

6. The compound of claim 5 in which R_5 is a substituted or unsubstituted aryl.

7. A diaryl zwitterionic iodonium salt having an iodine atom that is positively charged and an anionic group which comprises either a first substituted arene group designated A_1 or a second

substituted arene group designated A_2 , in which A_1 and A_2 are each

5 independently selected from the group consisting of:

benzene, fluorobenzene, nitrobenzene, benzoic acid, toluene,
anisole, iodobenzene, 2-nitroiodobenzene, 3-nitroiodobenzene,
4-nitroiodobenzene, 2-iodobenzoic acid, 3-iodobenzoic acid, 4-
iodobenzoic acid, fluoroiodobenzene 4-Iodoanisole, 3-

10 acetamidoiodobenzene, and 4- acetamidoiodobenzene;

further wherein either A_1 or A_2 contain an $\text{SO}_2\text{-N-SO}_2\text{R}_5$ group
substituted upon the arene ring;

wherein R_5 is selected from the group consisting of substituted
or unsubstituted alkyls, aryls, cycloalkyls, fluorinated alkyls, and
15 fluorinated cycloalkyls.

8. The salt compound of claim 7 in which the first arene group
 A_1 is benzene, and the second arene group A_2 is benzene.

9. The salt compound of claim 7 in which the first arene group
 A_1 is nitrobenzene, and the second arene group A_2 is nitrobenzene.

10. The salt compound of claim 7 in which the first arene
group A_1 is benzoic acid, and the second arene group A_2 is benzoic
acid.

11. The salt compound of claim 7 in which the first arene
group A_1 is toluene, and the second arene group A_2 is toluene.

12. The salt compound of claim 7 in which the first arene
group A_1 is anisole, and the second arene group A_2 is anisole.

13. The salt compound of claim 7 in which the first arene group A_1 is Iodobenzene, and the second arene group A_2 is benzene.

14. The salt compound of claim 7 in which the first arene group A_1 is 2-Nitroiodobenzene, and the second arene group A_2 is benzene.

15. The salt compound of claim 7 in which the first arene group A_1 is 3-Nitroiodobenzene, and the second arene group A_2 is benzene.

16. The salt compound of claim 7 in which the first arene group A_1 is 3-Nitroiodobenzene, and the second arene group A_2 is benzene.

17. The salt compound of claim 7 in which the first arene group A_1 is 4-Nitroiodobenzene, and the second arene group A_2 is benzene.

18. The salt compound of claim 7 in which the first arene group A_1 is 2-Iodobenzoic acid, and the second arene group A_2 is benzene.

19. The salt compound of claim 7 in which the first arene group A_1 is 3-Iodobenzoic acid, and the second arene group A_2 is benzene.

20. The salt compound of claim 7 in which the first arene group A_1 is 4-Iodobenzoic acid, and the second arene group A_2 is benzene.

21. A wafer having lithographically etched features on the surface of the wafer, the etched features being adapted for forming an electrical circuit, the etched features having a line width of less than about 0.5μ , whereby the etch is formed in a photoresist process that employs a diaryl zwitterionic iodonium salt.
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